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THE MENTALITY OF THE CROW

BY WILLIAM BREWSTER TABER, JR.

That the Crow is wise is the general consensus of opinion, and the usual belief is that it is very wise indeed. It is even credited with mental processes comparable to those of an intelligent human being. Recently in the *Atlantic Monthly* there appeared an article which illustrates what an exalted opinion of the Crow's intelligence is sometimes held by serious-minded people. It reads as follows, "A colony of rooks, perhaps the most intelligent of the crow tribe, was recently observed sitting in solemn conclave, like the Church authorities round the Jackdaw of Rhcims, about the person of one of their numbers. Their notes rose and fell with that harsh variation that always suggests conversation and debate. It continued for a while, when the assembled judges and juries suddenly fell upon a delinquent and put him to death. Why he was killed, what incident had preceded, the observer did not know; but of the deliberate killing, preceded by a period of debate, there seemed to be no doubt. Quite certainly rooks are as capable of communal action as the hive bees, but it proceeds from a motive power that is less instinctive, that is more reasonable. The rooks condemned a citizen to death in the straightforward human meaning of the phrase.

That crows converse is a generally accepted notion. Even so eminent an authority as Chapman writes, "No one who has listened to Crows will doubt that they have a language. But who can translate it?" Such opinions of the Crows' mental ability brought to mind the question whether they should be considered as reasoning and thinking animals, conversing in a manner similar to human beings, or as creatures like our other birds, subject to the all-powerful influence of instinct.

Although my attempts to trap Crows met with only partial success, their actions disclosed much concerning their mental processes. Experienced bird banders have learned to take advantage of the instincts, which psychologists have divided into three main groups, namely, self preservation, reproduction, and the herd instinct. When possible,

conditions about traps are so arranged that two or all of these instincts are played upon. For instance, suitable food or water placed under attractive conditions appeals to the self-preservation instinct. Likewise, during the gregarious season call birds appeal to the herd instinct. When the pull of these two instincts is combined, captures are practically certain to result. But let a Sparrow Hawk appear on the scene, then if the birds are small, self preservation opposes the herd instinct and no captures are possible until the fierce falcon has gone.

What then should be the procedure? Would it be necessary to disguise or hide the traps so they could not be recognized as such, and in case captures were made would it be necessary to empty the traps only after dark for fear lest some Crow would establish the connection between trap and man, and communicate it to others? Or would it be best to disregard the supposed super-bird mental qualities with which they are credited, and play upon their instincts?

For several weeks all attempts at trapping were futile. Snares, steel traps, several varieties of traps, large and small, built of wooden frames covered with poultry netting proved useless. Even the humorous adventures of Max and Moritz were called to mind, and an attempt was made with pieces of meat tied to strings in the hope that they would be swallowed string and all, and the birds thus secured. But it was of no use.

Finally a single Crow was caught. It was done with a simple drop trap eight feet long by four feet wide, the sides and ends made of 1x4-inch lumber, and the top covered with 2-inch poultry netting. No attempt was made to disguise or hide it. It was set vertically on its side and pulled over by a wire extending to a distant blind. The bait was a rabbit carcass and a few eggs, while a hog carcass was placed a short distance away as a general attraction. As it was February, the gregarious season, this Crow was placed in a large cage immediately behind the trap and used as a call bird. It proved to be effective for two days later another one was caught, and then others at frequent intervals. These first Crows were kept as call birds, and it was found that the more of them the greater was their attraction.

As soon as a bird was caught it was immediately removed from the trap regardless of how many others were present to witness. As a rule the witnesses were numerous, for upon the fall of the trap those feeding on the nearby hog carcass would rise into the air and set up a clamorous cawing, which attracted many others. Frequently before the trap could be reached a hundred or more would have gathered circling low over my head raising a great din and uproar. Could it

then be supposed that those witnessing this scene communicated the danger of this trap to others? Did they even realize the connection between the trap and man? Not possibly, for the catches continued, sometimes as many as four in a single day, accompanied by the same excitement, the same uproar, and the same gathering of distant crows who witnessed the removal of the captured one.

Still another incident helped to show that the Crow's mentality is not much higher than that of other birds. To realize the pertinence of this statement the effect of the falling trap upon the crow must be described. Crows are very suspicious and alert, and extremely quick to take wing. To catch them with this trap it must be pulled over with great force, or else by a quick leap backward and a single flap of the wings the Crow will escape. In every case the Crow was actually in the air when it was struck by the wire of the falling trap and knocked to the ground. This must have been a very terrifying experience. Yet one repeated. This Crow, 223674, was captured February 24, and held as a call bird until March 23, when it was released. It repeated on March 26, and again a few hours later the same day. On March 28 it was caught again. This conduct is typical of other birds, and like other birds, Crows must have very short memories for terrifying experiences.

If then Crows' behavior about traps indicates that their mental processes are very similar to those of other birds, how is it that they have survived man's persecution for a hundred years or more, and with apparently undiminished numbers? From observation of their approach to the bait, it is evident that their survival is due to fear, which results in extreme caution. It is common for an individual to take many minutes to traverse the last two or three feet of its approach to a perfectly harmless, very dead carcass; and this after a thorough inspection from the air, a nearby fence post, or a safe distance on the ground. Even then sometimes their fear overcomes their hunger and the bird flies away. They have learned to examine all food with great suspicion and to shun man as a dangerous enemy.

Have they a language? Yes, a language of action, as with other birds. Just as a mariner entering an uncharted harbor watches the course of other vessels and from their actions knows the windings of the channel and where lies the treacherous shoal, so the Crow watches his fellows and from their actions knows where there is some hidden danger. When two or three have found it safe to feed upon a carcass, others which have been watching to see the results of their boldness show a marked degree of less caution, some individuals even alighting

on the food directly from the air. Whenever a number are gathered in close proximity upon the ground their black backs cry the message to the wide heavens for all that fly to see, "here is food and safety." Crow and Vulture read the sign alike.

Are Crows conscious that their actions are carrying messages to their fellows? I doubt it. Just as an excited crowd of human beings unconsciously attracts others from as far as it can be seen or heard, so the crowd of noisy Crows circling over my head attracted others to the scene.

It is fully realized that behavior about a trap does not by any means tell the whole story of a bird's mind. But still the lessons that can be thus learned have much value in judging their mental ability.

KANSAS, ILLINOIS.

HIGHWAY MORTALITY AND SPEED OF FLIGHT

BY LYNDS JONES.

The writer has crossed the United States in automobiles, from Oberlin, Ohio, to the Pacific coast, nine times from east to west and eight times from west to east. The total mileage is above 60,000. The states traversed include all of those touching the Mississippi River and west of it, except Oklahoma and Kentucky; and of the states east of the river the following were crossed: Ohio, Indiana, Pennsylvania, Delaware, Maryland, District of Columbia, Virginia, North and South Carolina, Georgia and Florida. All but one of the trips have been class trips with a party of students, with from two to six cars, four persons to the car. The one exception was a trip west in the autumn and east in the spring with one car and two passengers, in 1925-26.

Among the studies undertaken on these trips was the counting of the dead animals noted on the roads, particularly the birds, and the speed of flight of such birds as flew parallel to our line of travel. Someone in the first car and someone in the last car was delegated to make the counts of the victims, but everybody was expected to note the flight.

All victims were recorded, whether or not determinations of the species could be made. Of course, when the species was known the name was recorded. Impressions of the numbers seen without making actual counts were compared with the actual numbers, and the impressions were invariably too high.

The first trip was made in the summer of 1919, beginning in late June, continuing through all of July and August, and into the first week of September. The route was across northern Indiana, central